IN THE CLAIMS:

1. (currently amended) A process for producing linear alkylbenzenes, the process comprising:

a) contacting benzene and an olefinic feedstock comprising a linear monoolefin having from about 8 to about 28 carbon atoms and having a concentration of coboiling aromatics of less than 2 wt-%, with a first catalyst comprising mordenite operating at first reaction conditions sufficient to alkylate benzene with the monoolefin and form linear phenyl-alkanes, wherein the first catalyst has a fluoride content of less than 0.05 wt-% based on the weight of the mordenite in the first catalyst, and recovering from the first reaction zone a first reaction product comprising linear phenyl-alkanes; and

b) contacting at least a portion of the first reaction product with a second catalyst comprising silica-alumina operating at second reaction conditions sufficient to alkylate benzene with monoolefin, and recovering from the process a second reaction product comprising linear phenyl-alkanes, wherein the linear phenyl-alkanes in the second reaction product comprise linear 2-phenyl-alkanes and wherein the second reaction product has a concentration of linear 2-phenyl-alkanes of from about 25 to about 80 wt-% based on the linear phenyl-alkanes in the second reaction product.

2. (original) The process of Claim 1 wherein the first catalyst occupies a first volume, the second catalyst occupies a second volume, and the first volume is from about 1% to about 70% by volume of the sum of the first volume and the second volume.

3. (original) The process of Claim 2 wherein the first volume is from about 5% to about 15% by volume of the sum of the first volume and the second volume.

4. (original) The process of Claim 1 further characterized in that the mordenite has a framework silica:alumina molar ratio of from 12:1 to about 90:1.

5. (original) The process of Claim 1 further characterized in that the first reaction conditions comprise a pressure sufficient to maintain at least partial liquid phase or supercritical conditions and a temperature of from about 80 to about 200°C.

6. (original) The process of Claim 1 further characterized in that the first catalyst has a fluoride content of less than 0.01 wt-% based on the weight of the mordenite in the first catalyst.

7. (original) The process of Claim 1 wherein the second catalyst has an LOI of from about 1 wt-% to about 12 wt-%.

8. (original) The process of Claim 1 wherein the second catalyst has a fluoride content of from 1 to 6 wt-%.

9. (original) The process of Claim 1 wherein the second catalyst has a weight ratio of silica per alumina of from about 1:1 to about 19:1.

10. (original) The process of Claim 1 wherein the second catalyst comprises fluorided silica-alumina.

11. (original) The process of Claim 1 further characterized in that the second reaction conditions comprise a pressure sufficient to maintain at least partial liquid phase or supercritical conditions and a temperature of from about 80 to about 225°C.

12. (original) The process of Claim 1 further characterized in that the linear monoolefin contacts the second catalyst.

13. (original) The process of Claim 1 further characterized in that the first reaction product comprises the linear monoolefin.

14. (original) The process of Claim 1 further characterized in that no monoolefin contacts the second catalyst.

15. (original) The process of Claim 1 further characterized in that a reaction zone contains the first catalyst, wherein the recovering of the reaction product further comprises recovering from the reaction zone a first product stream comprising the reaction product, wherein the contacting of the reaction product with the second catalyst further comprises contacting a first aliquot portion of the first product stream with the second catalyst, and further characterized in that a second aliquot portion of the first product stream is recycled to the reaction zone.

16. (original) The process of Claim 1 further characterized in that a second reaction zone contains the second catalyst, wherein the recovering of the second reaction product further comprises recovering from the second reaction contacting zone a second product stream comprising the second reaction contacting product and recovering from the process the phenyl-alkanes in the second product stream in a first aliquot portion of the second product stream, and

further characterized in that a second aliquot portion of the second product stream is recycled to the second catalyst.

17. (original) The process of Claim 16 further characterized in that a third aliquot portion of the second product stream is recycled to the first catalyst.

18. (original) The process of Claim 1 wherein the recovering of the first reaction product further comprises recovering a first product stream comprising the first reaction product, wherein the contacting of the first reaction product with the second catalyst further comprises contacting a first aliquot portion of the first product stream with the second catalyst, and further characterized in that the phenyl-alkane in the first product stream is recovered from the process in a second aliquot portion of the first product stream.

19. (original) The process of Claim 1 wherein the first catalyst and the second catalyst are in a common reaction vessel.

20. (original) The process of Claim 1 further characterized in that a paraffinic feedstock comprising a linear paraffin having from about 8 to about 28 carbon atoms is dehydrogenated in a dehydrogenation zone to dehydrogenate the linear paraffins and form a dehydrogenation product comprising the linear monoolefin and the coboiling aromatics, and the olefinic feedstock is formed from at least a portion of the paraffinic feedstock.

21. (original) The process of Claim 1 wherein the first catalyst is not treated with fluoride.